

Notice of Allowability

Application No.

10/826,212

Examiner

Allana Lewin

Applicant(s)

ANDERS ET AL.

Art Unit

3764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendments filed 8/3/2006.
2. ☒ The allowed claim(s) is/are 1-13 and 15-17.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

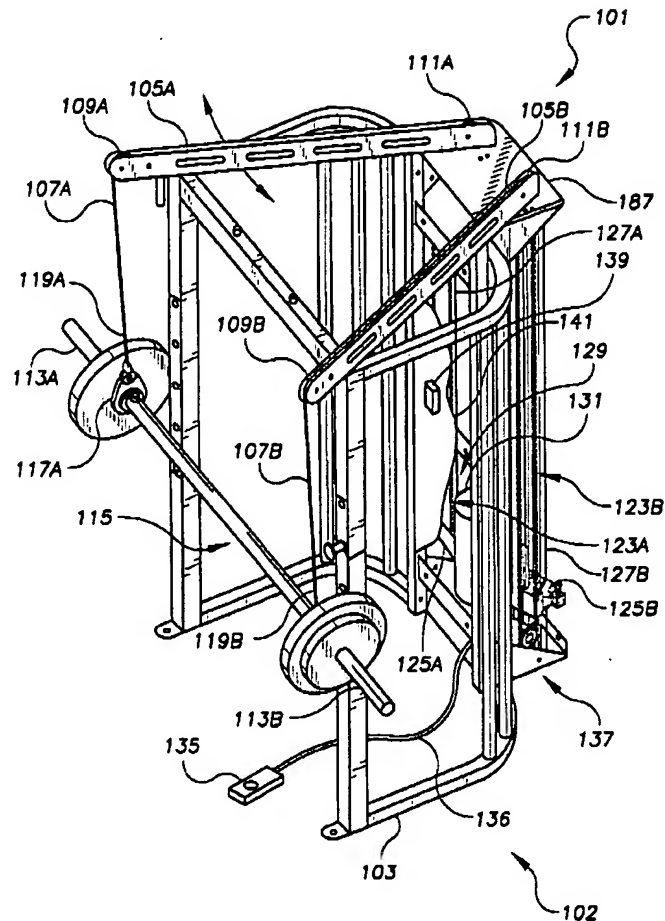
1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

- In claim 16, line 21, replace the word 'connection' with --connected--.
- In claim 17, line 24, replace the word 'connection' with --connected--.

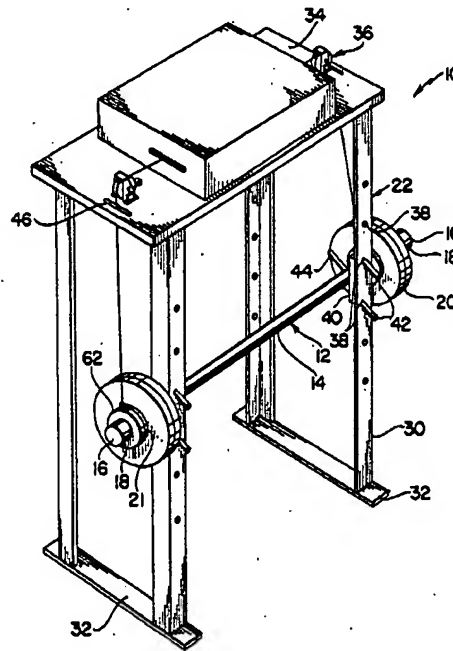
Allowable Subject Matter

2. Claims 1-13, and 15-17 are allowed.
3. The following is an examiner's statement of reasons for allowance:
4. Slawinski et al. (US Pat. No. 6,293,892), shown in the figure below, discloses a free weight assistance device comprising a base (103 and 137), a generally upright weight support structure (note Figure 1), a free weight support bar (211), and two cables mounted on the upright weight support structure (107A and 107B). Slawinski teaches that a microprocessor can be utilized to perform the control and logic operations of the apparatus. Slawinski further discloses sheaves (109A, 109B, 111A and 111B), or reel means, that are rotatably mounted (note Figure 1), which rotate to allow the cables to extend or retract.



5. Slawinski fails to disclose a bar position detector device and particularly a bar position detector device including a bar position light curtain. Additionally, Slawinski fails to disclose a sensor unit comprising a rotatable optical disk including alternating light and dark radial sections, with the sensor unit operatively cooperating with the cables, the reel means and the support bar to provide a tensioning force on the cables when a stop in the rotation of the reel means is detected by the sensor thereby providing assistance to the user during lifting of the bar.

6. Ryan (US Pat. No. 5,048,826), shown in the figure below, discloses a free weight assistance and training device comprising a base (32), a generally upright weight support structure (note Figure 1), a free weight support bar (12), two cables (26), a controller (29) comprising a programmable microcontroller, reel means provided by pulley assemblies (36), drive means provided by a winch assembly (24), and velocity and tension sensors (27, 28).

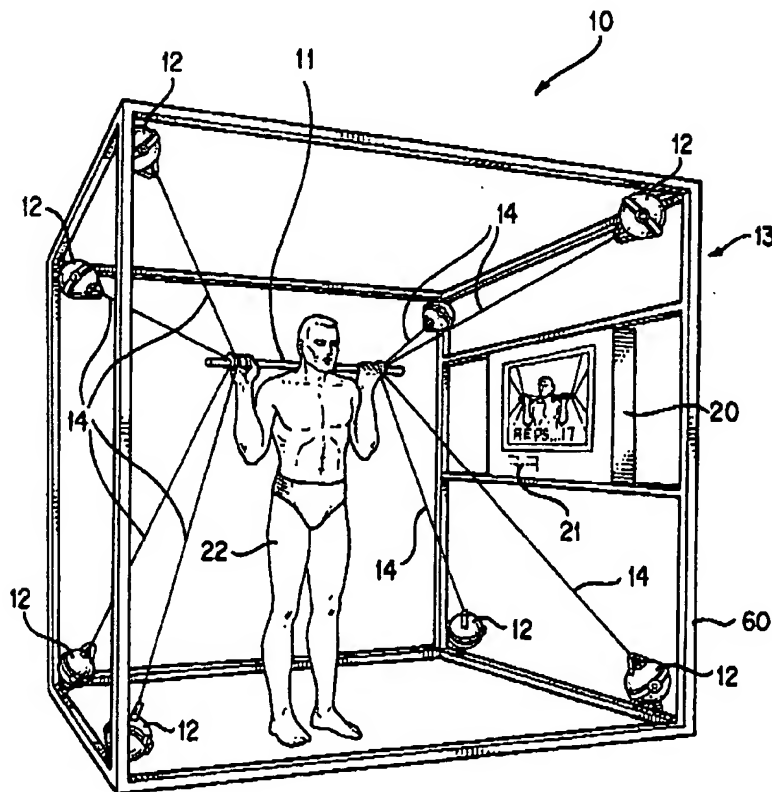


7. Ryan fails to disclose or suggest a bar position detector device including two interconnected elements, a cable angle detection device, and, particularly, a bar position detection light curtain, all of which cooperate and function as claimed in detail in claim 1. Furthermore, Ryan fails to disclose a sensor unit comprising a rotatable optical disk including alternating light and dark radial sections with the sensor being operative to count the number and speed of the rotations of the disk by the alternating radial

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sections and the sensor unit operatively cooperating with the cables, the reel means and the support bar to provide a tensioning force on the cables when a stop in the rotation of the reel means is detected by the sensor thereby providing assistance to the user during lifting of the bar.

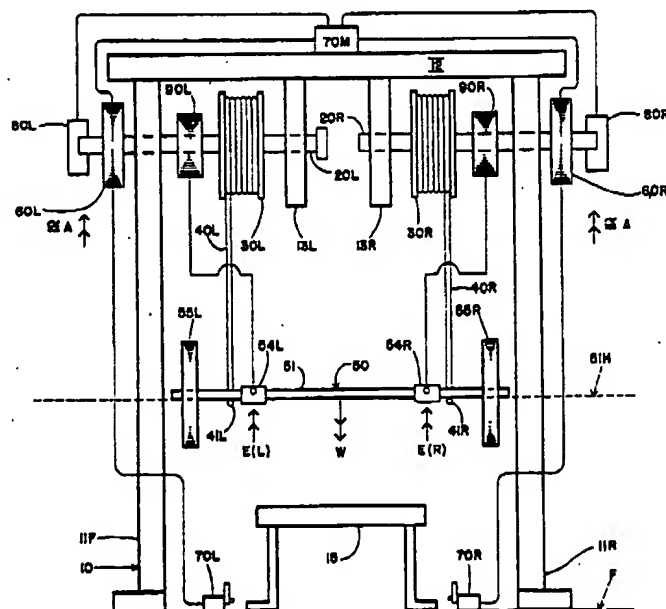
8. Harvey et al. (US Pat. No. 6,280,361), shown in the figure below, discloses an exercise device comprising a base and generally upright support structure (note Figure 1A), a bar (11), a control structure (19) that includes a processor circuit (35) with a memory (36) that controls the tension forces in the cables (14), drive means (29), and force and displacement sensors (27, 28).



9. Harvey fails to disclose a bar position detector device including two interconnected elements, a cable angle detection device, and, particularly, a bar position detection light curtain, all of which cooperate and function as claimed in detail in claim 1. Furthermore, Harvey fails to disclose a sensor unit comprising a rotatable optical disk including alternating light and dark radial sections with the sensor being operative to count the number and speed of the rotations of the disk by the alternating radial sections.

10. Anders et al. (US Pat. No. 4,998,721), shown in the figure below, discloses a weightlifting exercise device comprising a base and a generally upright weight support structure (note Figure 1), a free weight support bar (50), two cables (40), rotatably mounted reel means (30), drive means (60) and encoder means (80) or sensor units.

11. Anders fails to disclose a computer-controlled weight tensioning device, or a bar position detector device, or the sensor unit comprising a rotatable optical disk including alternating light and dark radial sections.



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12. The prior art of record fails to disclose or suggest a free weight assistance and training device comprising a computer-controlled weight tensioning device operatively cooperating with at least two cables and a free weight support bar and providing assistance to a user during exercise, a bar position detection device particularly including a bar position detection light curtain, or a sensor unit comprising a rotatable optical disk with alternating light and dark radial sections. Furthermore, the prior art or record fails to disclose the invention as detailed in claims 1, 16, and 17.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allana Lewin whose telephone number is 571-272-5560. The examiner can normally be reached on Monday-Friday, 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on 571-272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


GLENN E. RICHMAN
PRIMARY EXAMINER

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August 24th, 2006